VPDES PERMIT PROGRAM FACT SHEET
FILE NO: 1111

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a **MINOR, INDUSTRIAL** permit.

1. **PERMIT NO.**: VA0091405 **EXPIRATION DATE**: 05/02/09

2. **FACILITY NAME AND LOCAL MAILING ADDRESS**

Lake Gaston Water Treatment Plant
Department of Public Utilities
306 Cedar Road
Chesapeake, VA 23322

FACILITY LOCATION ADDRESS (IF DIFFERENT)

5416 Military Hwy West
Chesapeake, VA 23321

CONTACT AT FACILITY:
NAME: Mr. Craig Maples
TITLE: Water Resources Mgr. Admin.
PHONE: (757) 382-3550

CONTACT AT LOCATION ADDRESS
NAME: Same
TITLE: INSERT MODE
PHONE: ( )

3. **OWNER CONTACT**: (TO RECEIVE PERMIT)
NAME: Mr. Craig Maples
TITLE: Water Resources Mgr. Admin.
COMPANY NAME: same
ADDRESS: 3550 S. Battlefield Blvd.
Chesapeake, VA 23322
PHONE: ( )same

CONSULTANT CONTACT:
NAME:
FIRM NAME:
ADDRESS:

PHONE:

4. **PERMIT DRAFTED BY**: DEQ, Water Permits, Regional Office

Permit Writer(s): Robert E. Smithson Date(s): 07/23/08, 02/05/09 (toxics review received & incorporated)

Reviewed By: Mark Sauer Date(s): 02/18/09

5. **PERMIT ACTION:**

( ) Issuance (X) Reissuance ( ) Revoke & Reissue ( ) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date:]

6. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1	Site Inspection Report/Memorandum
Attachment 2	Discharge Location/Topographic Map
Attachment 3	Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4	TABLE I - Discharge/Outfall Description
Attachment 5	TABLE II - Effluent Monitoring/Limitations
Attachment 6	Effluent Limitations/Monitoring Rationale/Suitable Data/Antidegradation/Antibacksliding
Attachment 7	Special Conditions Rationale
Attachment 8	Toxics Monitoring/Toxics Reduction/WET Limit Rationale
Attachment 9	Material Stored
Attachment 10	Receiving Waters Info./Tier Determination/STORET Data/Stream Modeling
Attachment 11	TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 12	NPDES Industrial Permit Rating Worksheet and EPA Permit Checklist
Attachment 13	Chronology Sheet
Attachment 14	Other Documents

10/7/08 technically complete w/ data submitted

APPLICATION COMPLETE: 07/7/08 (VDH comments)

7. **PERMIT CHARACTERIZATION**: (Check as many as appropriate)

(X) Existing Discharge	(X) Effluent Limited
( ) Proposed Discharge	(X) Water Quality Limited
( ) Municipal	( ) WET Limit
SIC Code(s)	( ) Interim Limits in Permit
(X) Industrial	( ) Interim Limits in Other Document
SIC Code(s)4941	( ) Compliance Schedule Required
( ) POTW	( ) Site Specific WQ Criteria
( ) PVOTW	( ) Variance to WQ Standards
( ) Private	( ) Water Effects Ratio
( ) Federal	( ) Discharge to 303(d) Listed Segment
( ) State	(X) Toxics Management Program Required
(X) Publicly-Owned Industrial	( ) Toxics Reduction Evaluation
	( ) Storm Water Management Plan
	( ) Pretreatment Program Required
	( ) Possible Interstate Effect

8. **RECEIVING WATERS CLASSIFICATION**: River basin information.

Outfall No(s):001

Receiving Stream:	Unnamed tributary to Goose Creek
River Mile:	0.99
Basin:	James River (lower)
Subbasin:	NA
Section:	1e
Class:	III
Special Standard(s):	NEW-19
Tidal:	NO
7-Day/10-Year Low Flow:	0
1-Day/10-Year Low Flow:	0
30-Day/5-Year Low Flow:	0
Harmonic Mean Flow:	NA

9. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

Industrial discharge resulting from the UF membrane concentrate, manganese contactor backwash water, membrane cleaning solution, and plant sanitary effluent.

10. **LICENSED OPERATOR REQUIREMENTS**: (X) No ( ) Yes Class:

11. **RELIABILITY CLASS**: Industrial Facility - NA

12. **SITE INSPECTION DATE**: 07/08/08 **REPORT DATE**: 7/17/08

Performed By: Jennifer LaCroix

SEE ATTACHMENT 1

13. **DISCHARGE(S) LOCATION DESCRIPTION**: Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Bowers Hill Quadrant No.: 35C **SEE ATTACHMENT 2**

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

Narrative:

SEE ATTACHMENT 3 (CAN ALSO REFERENCE TABLE I)

15. **DISCHARGE DESCRIPTION:** Describe each discharge originating from this facility.

SEE **TABLE I** (OR CAN SUBSTITUTE PAGE 2C) - **SEE ATTACHMENT 4**

16. **COMBINED TOTAL FLOW:**

TOTAL: 1.0 MGD (for public notice)

PROCESS FLOW: 1.0 MGD (IND.)

NONPROCESS/RAINFALL DEPENDENT FLOW: NA (Est.)

DESIGN FLOW: _____ MGD (MUN.)

17. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS:**
(Check all which are appropriate)

- [X] State Water Control Law
- [X] Clean Water Act
- [X] VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
- [X] EPA NPDES Regulation (Federal Register)
- [ ] EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
- [X] Water Quality Standards (9 VAC 25-260-5 et seq.)
- [ ] Wasteload Allocation from a TMDL or River Basin Plan

18. **EFFLUENT LIMITATIONS/MONITORING:** Provide all limitations and monitoring requirements being placed on each outfall.

SEE TABLE II - ATTACHMENT 5

19. **EFFLUENT LIMITATIONS/MONITORING RATIONALE:** Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: In what, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as tier 1; therefore, no further review is needed. Permit limits have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit). **SEE ATTACHMENT 6**

20. **SPECIAL CONDITIONS RATIONALE**: Provide a rationale for each of the permit's special conditions.

SEE ATTACHMENT 7

21. **TOXICS MONITORING/TOXICS REDUCTION AND WET LIMIT SPECIAL CONDITIONS RATIONALE**: Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit; the actual conditions for the permit are to be included under Attachment 6.

SEE ATTACHMENT 8

22. **SLUDGE DISPOSAL PLAN**: Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

Thickened residuals removed from the bottom of the Sludge Thickener will be dewatered in a centrifuge and hauled to the City's existing residuals disposal site, located near the existing Northwest River WTP.

23. **MATERIAL STORED**: List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

The chemicals are stored in tanks within concrete containment areas. The containment is designed to contain the volume of the largest tank in the containment area, should a leak or spill occur. Each containment area is provided with a submersible pump. If there is a rain event and the operators can determine that the water in the containment area is just rainwater, they can choose to manually pump the water to the Gravity Thickener. If a chemical spill or leak occurs, then the operators follow their chemical leak/spill procedures and do not pump to the Gravity Thickener. **SEE ATTACHMENT 9**

24. **RECEIVING WATERS INFORMATION**: Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). **Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied.** Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

N/A - no STORET data available

25 **303(d) Listed Segments**: Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/calculations.

TMDLs are not included in this permit as the receiving waters are not listed on the 303(d) list.

See attachment 10

26. **CHANGES TO PERMIT**: Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 11_

27. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET:**

TOTAL SCORE: 63 **SEE ATTACHMENT 12_**

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT**: Document any comments received from DEQ planning.

The discharge is not addressed in any planning document but will be included when the plan is updated.

29. **PUBLIC PARTICIPATION**: Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and noted how resolved.

The VDH reviewed the application and waived their right to comment and/or object on the adequacy of the draft permit.
The DSS had no comments on the application/draft permit.

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

EPA waived the right to comment and/or object to the adequacy of the draft permit.

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

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OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

Not Applicable.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and no comments were received.

PUBLIC NOTICE INFORMATION: Comment Period: Start Date 3/13 2009
End Date 4/13 2009

Persons may comment in writing or by e-mail to the DEQ on the proposed issuance of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Robert E. Smithson at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, VA 23462. Telephone: 757-518-2106 E-mail: resmithson@deq.virginia.gov

Following the comment period, the Board will make a determination regarding the proposed issuance. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

Water Quality Monitoring (Appendix A) was submitted with this application and was reviewed for WQS exceedances. Ammonia-Nitrogen (NH3-N) was reported at 380 mg/l, warranting further monitoring.* The facility was asked to take another sample for dissolved silver (data point was <5 ug/l) using a QL value lower than 5 ug/l.

* By correspondence dated 10/7/08 we recieved clarification that the 380 ammonia was in ug/L or 0.380 mg/L (a non-issue for us) diss. silver resample @ the proper QL was <0.05 ug/L

66

Chesapeake VIRGINIA

Department of Public Utilities
Northwest River Water Treatment Plant
3550 S. Battlefield Boulevard
Chesapeake, VA 23322
Tel: (757) 382-3550
Fax: (757) 421-4483

November 27, 2007

Mr. Robert Smithson
Department of Environmental Quality
5636 Southern Blvd.
Virginia Beach, VA 23462

RE: VPDES Permit No. VA0091405
Lake Gaston Water Treatment Plant, Chesapeake, VA

Dear Mr. Smithson:

Enclosed, please find copies of two water quality results for the Lake Gaston Water Treatment Plant Effluent Discharge Outfall 001. Samples were collected on August 4, 2008 and September 2008 for dissolved copper and silver analyses. They were sent to Hampton Roads Sanitation District Central Lab for clean metals analysis.

Another form attached is a clarification for the ammonia result. The report sent in 2007 listed the unit in parts per billion and the number became ambiguous. Same result is listed on this form but unit is changed to parts per million.

If you need more information, please call me at 382-3550.

Sincerely,

Violee B. DeLuna
Water Quality Supervisor

cc: A. Craig Maples, Water Resource Administrator

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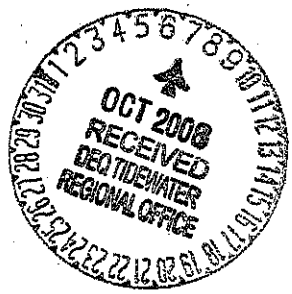
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT A



FACILITY NAME: Lake Gaston Water Treatment Plant

ADDRESS: 5416 Military Hwy West
Chesapeake, VA 23321

PERMIT NO.: VA0091405 OUTFALL NO.: _001_

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4]
210	39032	Pentachlorophenol	625	50.0		G or C		NA
175	46000	Phenol[8]	625	10.0		G or C		NA
602	34621	2,4,6-Trichlorophenol	625	10.0		G or C		NA

MISCELLANEOUS

REPORTING PERIOD: FROM: 01/01/07 TO: 12/31/07

REPRESENTING: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th SEMIANNUAL PERIOD (circle one)

1st, 2nd, 3rd, 4th, 5th ANNUAL PERIOD (circle one)

ONCE PER PERMIT TERM

039	00610	Ammonia as NH3-N	350.1	200	0.380 mg/L	C	C	NA
		Chlorides (mg/l)	(6)	(7)		C	(FW & PWS)	NA
005	50060	Chlorine, Total Residual	(6)	100		G	C	NA
018	00720	Cyanide	335.2	10.0		G	C	NA
306	03556	Dioxin	1613	0.00001		C	C	NA
		Fecal Coliform N/CML)	(6)	(7)		G	C	NA
		Foaming Agents (as MBAS)	(6)	(7)		G	(PWS)	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)		C	C	NA
		Hydrogen Sulfide	(6)	(7)		G	C	NA
		Nitrate (as mg/l N)	(6)	(7)		C	C	NA
009	00945	Sulfate (mg/l)	(6)	(7)		C	(PWS)	NA
		Total Dissolved Solids (mg/l)	(6)	(7)		C	(PWS)	NA
350	30340	Tributyltin	(9)	(9)		C	C	
252	81551	Xylenes (total)	SW 846 Method 8021B	(7)		G	C	NA

Craig Mathes — Water Resources Admin.
Name of Principal Exec. Officer or Authorized Agent / Title

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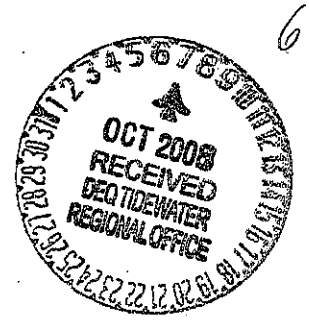
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT A



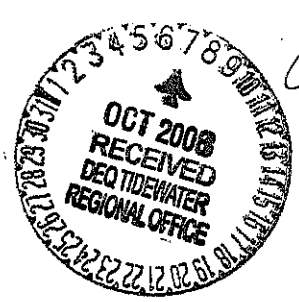
FACILITY NAME: Lake Gaston WTP

ADDRESS: 5416 Military Hwy West
Chesapeake, VA 23321

PERMIT NO.: VA0091405 OUTFALL NO.: _001_

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4]
		METALS						
		REPORTING PERIOD: FROM: 7/01/08 TO: 09/30/08 **REPRESENTING:** 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th QUARTERLY PERIOD (circle one) 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th SEMIANNUAL PERIOD (circle one) 1st, 2nd, 3rd, 4th, 5th ANNUAL PERIOD (circle one) ONCE PER PERMIT TERM						
		Antimony (Dissolved)	(5)	(5)		G	B	
438	01000	Arsenic (Dissolved)	(5)	(5)		G	(PWS)	
		Arsenic III (Dissolved)	(5)	(5)		G	B	
439	01005	Barium (Dissolved)	(5)	(5)		G	(PWS)	
440	01025	Cadmium (Dissolved)	(5)	(5)		G	B	
232	01033	Chromium III* (Dissolved)	(5)	(5)		G	(FW)	
023	01032	Chromium VI (Dissolved)	(5)	(5)		G	B	
442	01040	Copper (Dissolved)	(5)	(5)	<0.5	G	B	
308	01046	Iron (Dissolved)	(5)	(5)		G	(PWS)	
405	01049	Lead (Dissolved)	(5)	(5)		G	B	
443	01056	Manganese (Dissolved)	(5)	(5)		G	(PWS)	
444	71890	Mercury (Dissolved)	(5)	(5)		G	B	
445	01065	Nickel (Dissolved)	(5)	(5)		G	B	
446	01145	Selenium (Dissolved)	(5)	(5)		G	B	
447	01075	Silver (Dissolved)	(5)	(5)	<0.05	G	B	
448	01092	Zinc (Dissolved)	(5)	(5)		G	B	

Note: SAMPLE WAS COLLECTED ON 09/11/08.



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DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT A

FACILITY NAME: Lake Gaston WTP

ADDRESS: 5416 Military Hwy West
Chesapeake, VA 23321

PERMIT NO.: VA0091405 OUTFALL NO.: _001_

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4]
METALS								
REPORTING PERIOD: FROM: 01/01/08 TO: 09/30/08 REPRESENTING: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th QUARTERLY PERIOD (circle one) 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th SEMIANNUAL PERIOD (circle one) 1st, 2nd, 3rd, 4th, 5th ANNUAL PERIOD (circle one) ONCE PER PERMIT TERM								
		Antimony (Dissolved)	(5)	(5)		G	B	
438	01000	Arsenic (Dissolved)	(5)	(5)		G	(PWS)	
		Arsenic III (Dissolved)	(5)	(5)		G	B	
439	01005	Barium (Dissolved)	(5)	(5)		G	(PWS)	
440	01025	Cadmium (Dissolved)	(5)	(5)		G	B	
232	01033	Chromium III* (Dissolved)	(5)	(5)		G	(FW)	
023	01032	Chromium VI (Dissolved)	(5)	(5)		G	B	
442	01040	Copper (Dissolved)	(5)	(5)	3.0	G	B	
308	01046	Iron (Dissolved)	(5)	(5)		G	(PWS)	
405	01049	Lead (Dissolved)	(5)	(5)		G	B	
443	01056	Manganese (Dissolved)	(5)	(5)		G	(PWS)	
444	71890	Mercury (Dissolved)	(5)	(5)		G	B	
445	01065	Nickel (Dissolved)	(5)	(5)		G	B	
446	01145	Selenium (Dissolved)	(5)	(5)		G	B	
447	01075	Silver (Dissolved)	(5)	(5)	< 0.05	G	B	
448	01092	Zinc (Dissolved)	(5)	(5)		G	B	

Note: Sample was collected on 08/04/08.

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

Facility:	LAKE GASTON WTP
County/city:	CHESAPEAKE, VA

VPDES NO.	VA0091405

DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTEWATER FACILITY
INSPECTION REPORT
PART 1

Inspection date:	**July 8, 2008**	Date form completed:	**July 17, 2008**
Inspection by:	**Jennifer J. LaCroix**	Inspection agency:	**DEQ/TRO**
Time spent:	**7 hrs**	Announced Inspection:	[ ] Yes [X] No
Reviewed by: **Kenneth T. Raum** KTR		Photographs taken at site?	[X] Yes [ ] No
Present at inspection:	**Tom Johnson – Chief Operator**		

FACILITY TYPE:	FACILITY CLASS:
( ) Municipal	( ) Major
(X) Industrial	(X) Minor
( ) Federal	( ) Small
( ) VPA/NDC	( ) High Priority ( ) Low Priority

TYPE OF INSPECTION:

Routine	X	Reinspection		Compliance/assistance/complaint	

Date of previous inspection:	**1st inspection**	Agency:	**DEQ/TRO**

Population Served:		Connections Served:	

Last Month Average: Influent	BOD_5 (mg/l)		TSS (mg/l)		Flow (MGD)			
	Other:							
Last Month Average: Effluent **Jun 2008** **Outfall 001**	pH (s.u.)	**6.9 – 7.4**	TDS (mg/l)	**164**	Flow (MGD)	**0.652**	DO (mg/l)	**5**
	Other: TP (mg/l) = **<0.20**, TN (mg/l) = **1.15**							
Last Quarter Average: Effluent	BOD_5 (mg/l)		TSS (mg/l)		Flow (MGD)		NH_3 (mg/l)	
	Other:							

Data verified in preface:	Updated?		NO CHANGES?	X
Has there been any new construction?		YES		NO X
If yes, were the plans and specifications approved?		YES		NO **N/A**
DEQ approval date:				

COPIES TO: (X) DEQ/TRO; (X) DEQ/OWCP; (X) OWNER; ( ) OPERATOR; ( ) EPA-Region III; ( ) Other:

PROBLEMS IDENTIFIED AT LAST INSPECTION:	CORRECTED	NOT CORRECTED
Not applicable. First inspection.		

SUMMARY

NSPECTION COMMENTS:

The drinking water treatment plant intakes approximately 7 MGD of raw water that is treated by state-of-the-art membrane filtration. General operation at the plant includes the use of 4 of the 6 membrane trains and 3 of 4 cassettes per train. The discharge from the facility is the waste liquid from the sludge thickener which travels through the plant waste basin to the outfall.

The path of waste water and solids from the membrane filters is as follows:

Waste from the membranes travels to the neutralization basin and then to the sludge thickener where the liquid is sent to the plant waste basin and then to the outfall for discharge. The sludge from the sludge thickener is sent to the centrifuge and then to the landfill for disposal.

After briefly tracking waste through the plant, the outfall was observed with a discharge occurring. The facility discharges approximately 600,000 gallons per day on average. The discharge appeared colorless and clear. (photo 1)

The facility was clean and well maintained. (photo 2) Empty drum storage was observed outside and in good order. Almost all of the drums were secured, but a few drums needed to be capped while waiting on pickup for disposal.

COMPLIANCE RECOMMENDATIONS FOR ACTION:

None noted.

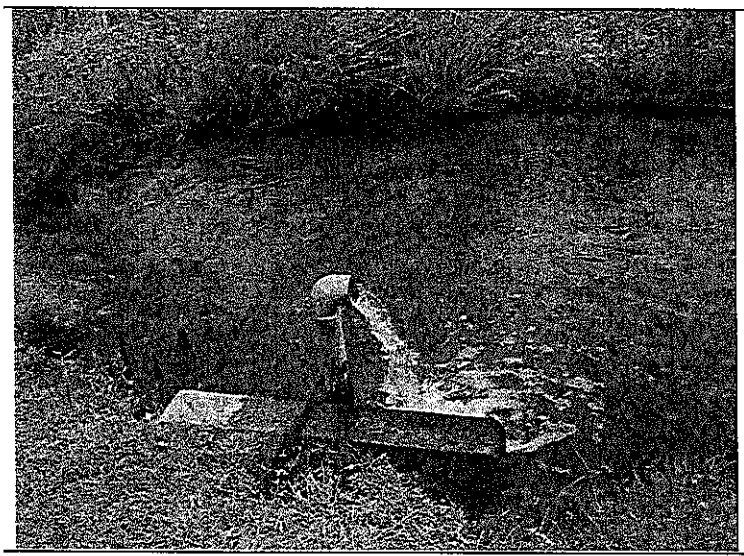


Photo 1 – Outfall 001.

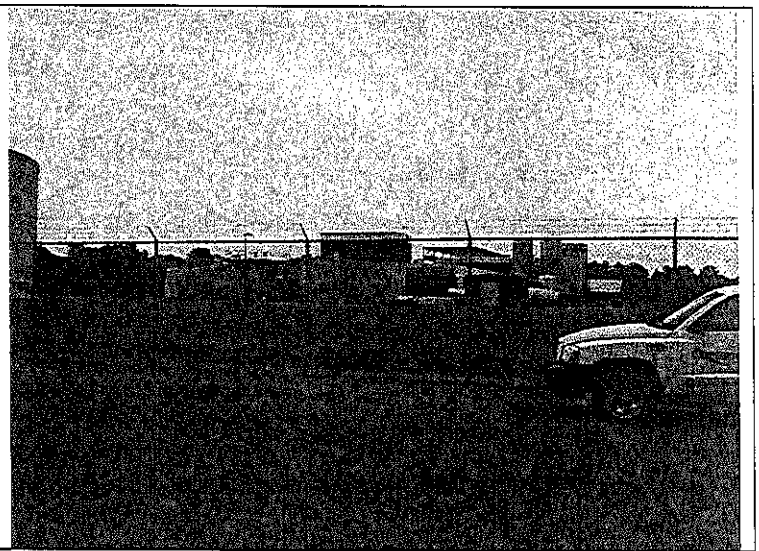
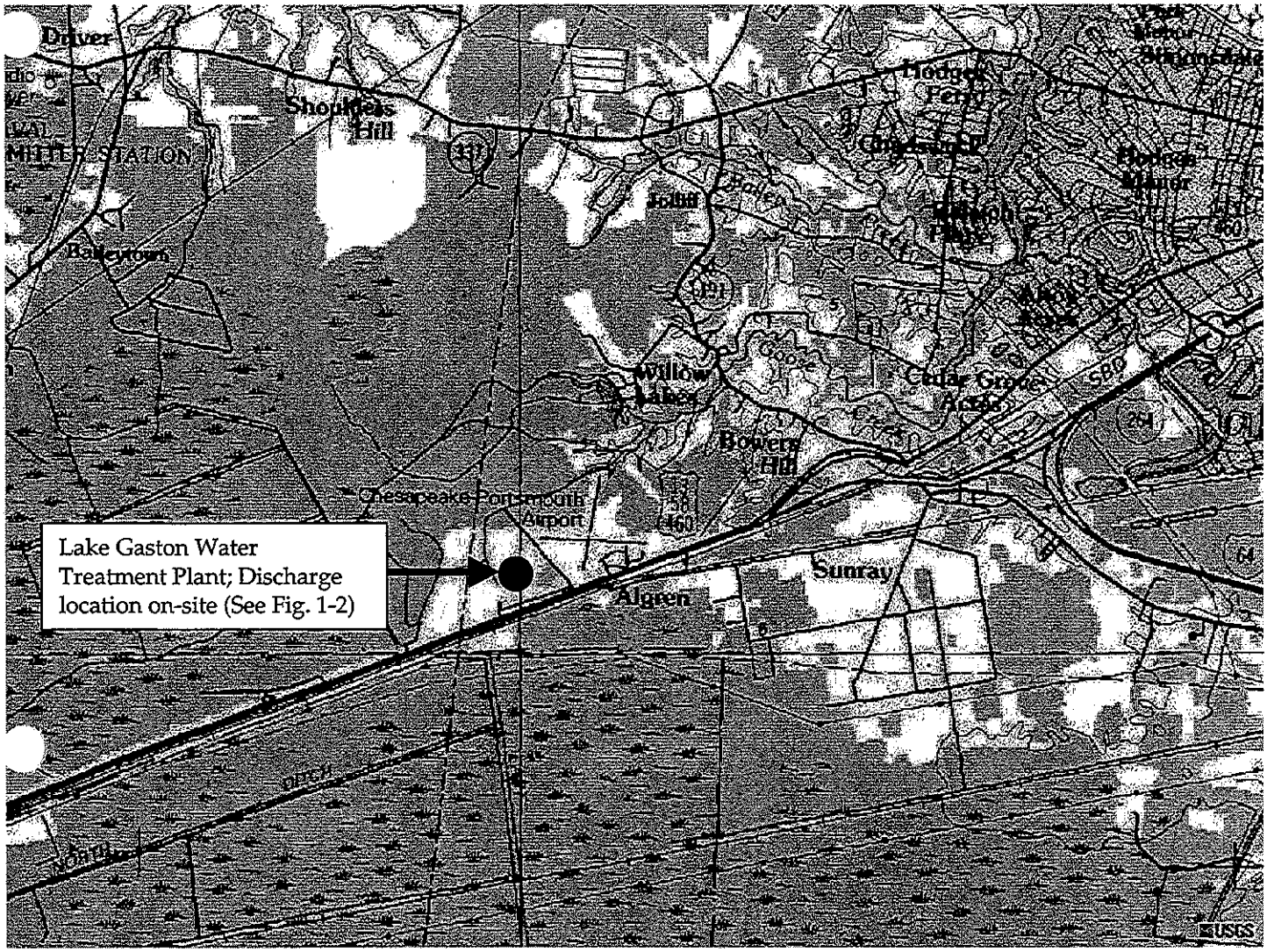


Photo 2 – View of Lake Gaston WTP.

ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

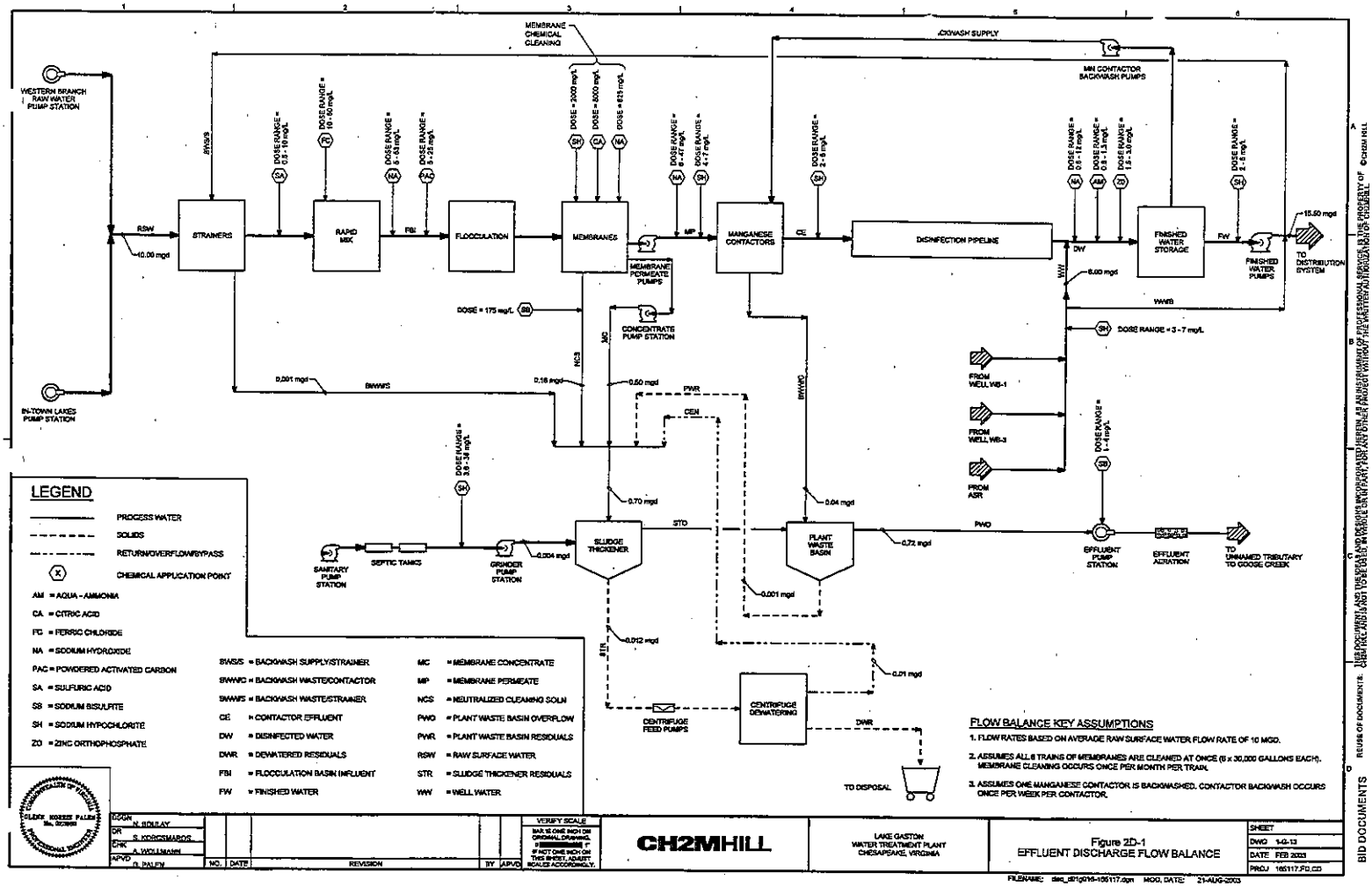


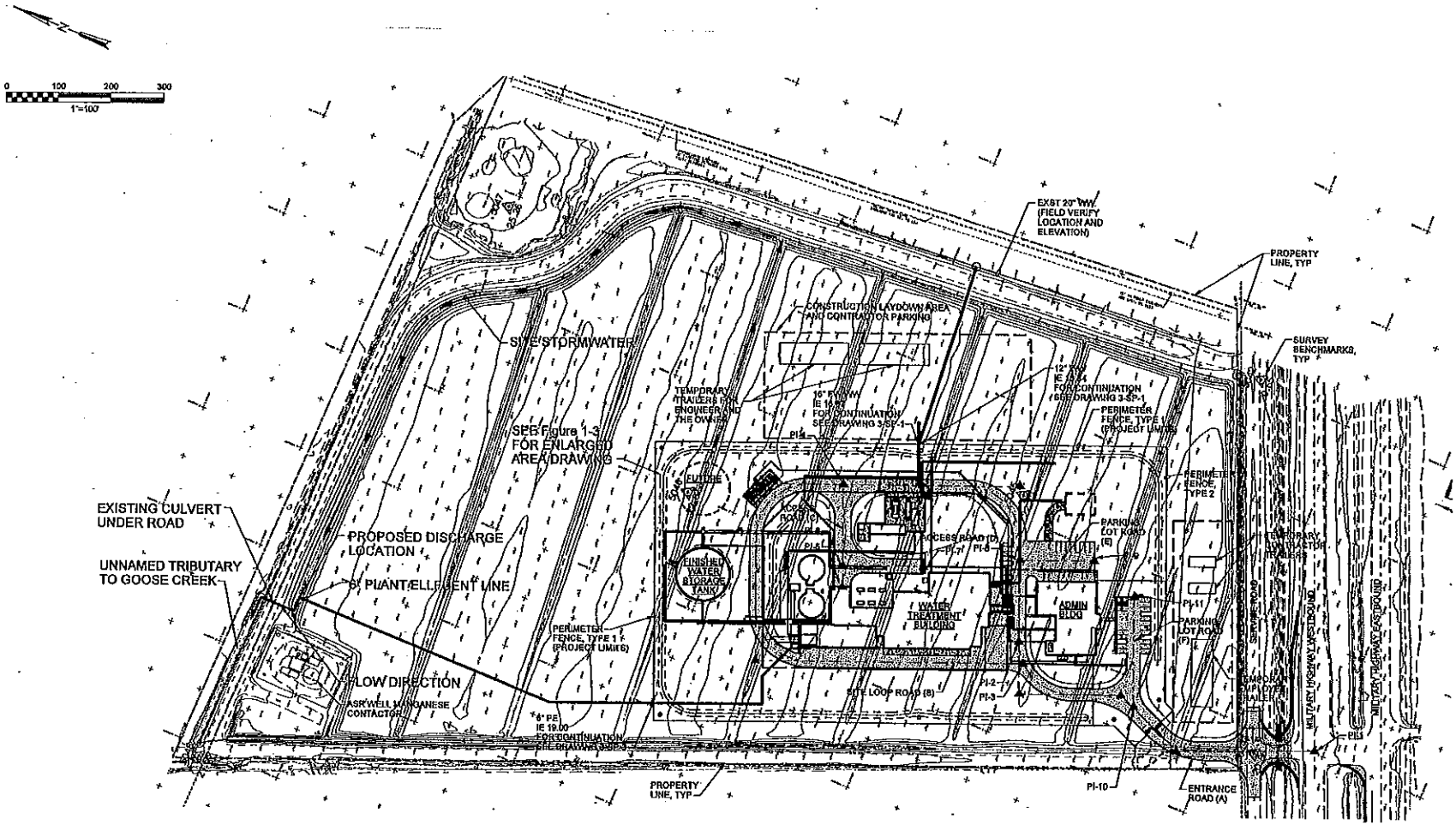
Source: USGS Map, Bowers Hill Quadrangle
SCALE: 1" = 2000'

Figure 1-1
LOCATION MAP
Lake Gaston Water Treatment Plant

ATTACHMENT 3

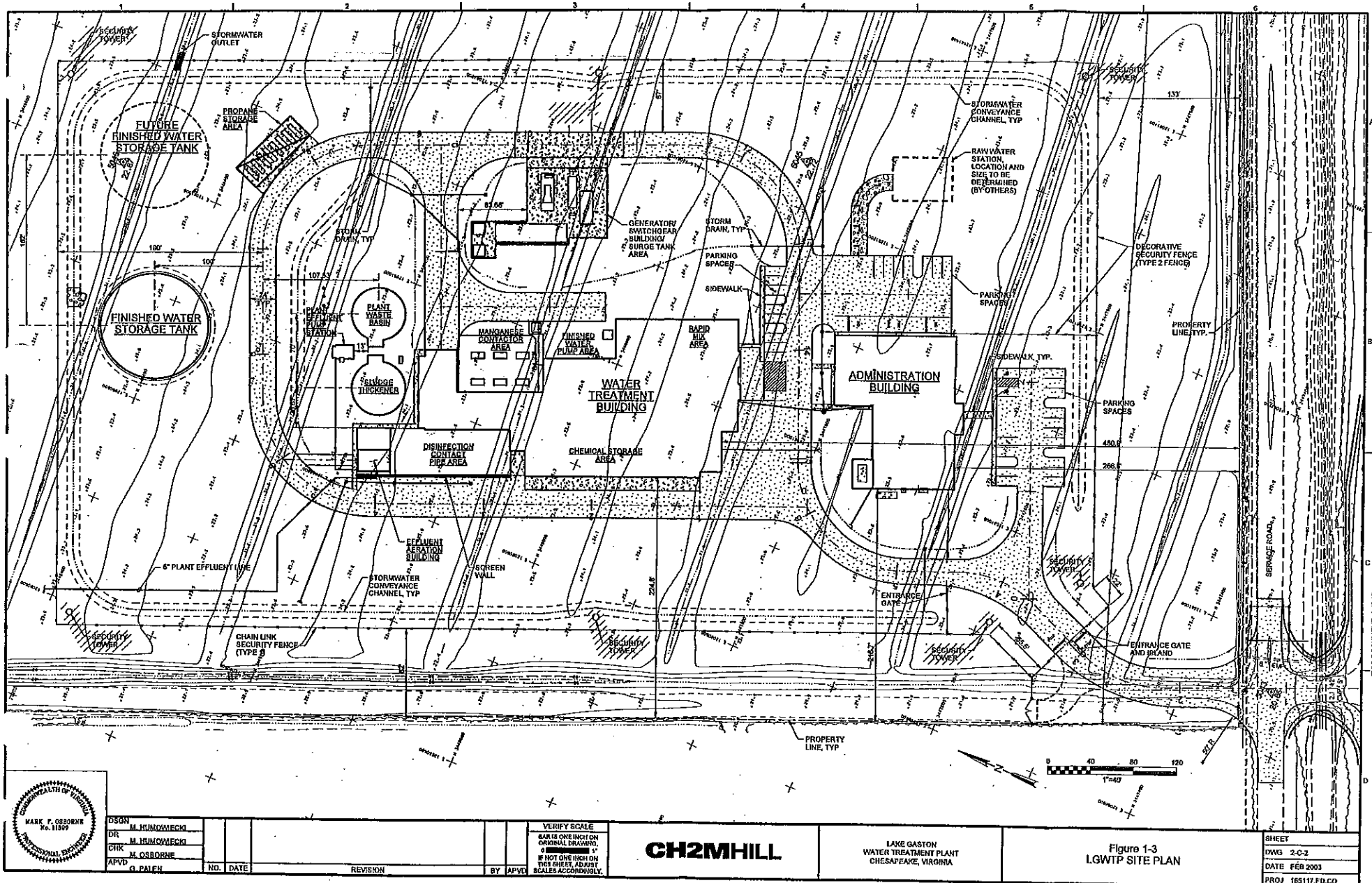
SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE


MEMBRANE CHEMICAL CLEANING
BACKWASH SUPPLY
MIN CONTACTOR BACKWASH PUMPS
WESTERN BRANCH RAW WATER PUMP STATION
IN-TOWN LAKES PUMP STATION
STRAINERS
RAPID MIX
FLOCCULATION
MEMBRANES
MANGANESE CONTACTORS
DISINFECTION PIPELINE
FINISHED WATER STORAGE
FINISHED WATER PUMPS
TO DISTRIBUTION SYSTEM
MEMBRANE PERMEATE PUMPS
CONCENTRATE PUMP STATION
FROM WELL WB-1
FROM WELL WB-3
FROM ASR
SANITARY PUMP STATION
SEPTIC TANKS
GRINDER PUMP STATION
SLUDGE THICKENER
PLANT WASTE BASIN
EFFLUENT PUMP STATION
EFFLUENT AERATION
TO UNNAMED TRIBUTARY TO GOOSE CREEK
CENTRIFUGE FEED PUMPS
CENTRIFUGE DEWATERING
TO DISPOSAL
15.50 mgd
10.00 mgd
8.00 mgd
0.001 mgd
0.18 mgd
0.50 mgd
0.70 mgd
0.04 mgd
0.72 mgd
0.004 mgd
0.012 mgd
0.01 mgd
LEGEND
PROCESS WATER
SOLIDS
RETURN/OVERFLOW/BYPASS
CHEMICAL APPLICATION POINT
AM = AQUA - AMMONIA
CA = CITRIC ACID
FC = FERRIC CHLORIDE
NA = SODIUM HYDROXIDE
PAC = POWDERED ACTIVATED CARBON
SA = SULFURIC ACID
SB = SODIUM BISULFITE
SH = SODIUM HYPOCHLORITE
ZO = ZINC ORTHOPHOSPHATE
BWSS = BACKWASH SUPPLY/STRAINER
BWWC = BACKWASH WASTE/CONTACTOR
BWWS = BACKWASH WASTE/STRAINER
CE = CONTACTOR EFFLUENT
DW = DISINFECTED WATER
DWR = DEWATERED RESIDUALS
FBI = FLOCCULATION BASIN INFLUENT
FW = FINISHED WATER
MC = MEMBRANE CONCENTRATE
MP = MEMBRANE PERMEATE
NCS = NEUTRALIZED CLEANING SOLN
PWO = PLANT WASTE BASIN OVERFLOW
PWR = PLANT WASTE BASIN RESIDUALS
RSW = RAW SURFACE WATER
STR = SLUDGE THICKENER RESIDUALS
WW = WELL WATER
FLOW BALANCE KEY ASSUMPTIONS
1. FLOW RATES BASED ON AVERAGE RAW SURFACE WATER FLOW RATE OF 10 MGD.
2. ASSUMES ALL 6 TRAINS OF MEMBRANES ARE CLEANED AT ONCE (6 x 30,000 GALLONS EACH). MEMBRANE CLEANING OCCURS ONCE PER MONTH PER TRAIN.
3. ASSUMES ONE MANGANESE CONTACTOR IS BACKWASHED. CONTACTOR BACKWASH OCCURS ONCE PER WEEK PER CONTACTOR.
CH2MHILL
LAKE GASTON WATER TREATMENT PLANT CHESAPEAKE, VIRGINIA
Figure 2D-1
EFFLUENT DISCHARGE FLOW BALANCE
BID DOCUMENTS



DSGN	M. HUMOWIECKI					VERIFY SCALE	CH2MHILL	LAKE GASTON WATER TREATMENT PLANT CHESAPEAKE, VIRGINIA	Figure 1-2 OVERALL SITE PLAN SHOWING PROPOSED DISCHARGE LOCATION	SHEET
DR	L. SHAFFER					BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.				DWG 2-C-1
CHK	M. OSBORNE	NO.	DATE	REVISION	BY	APVD				DATE FEB 2003
APVD	G. PALEN									PROJ 155117.FD.CD

FILENAME: deq_d02c001-165117.dgn MOD. DATE: 22-AUG-2003



MARK P. OSBORNE No. 11599 COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

DSGN	M. HUMOWIECKI
DR	M. HUMOWIECKI
CHK	M. OSBORNE
APVD	G. PALEN

NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL

LAKE GASTON WATER TREATMENT PLANT CHESAPEAKE, VIRGINIA

Figure 1-3
LGWTP SITE PLAN

SHEET	
DWG	2-C-2
DATE	FEB 2003
PROJ	185117.FD.CO

FILENAME: dsq_d02c002-185117.dgn MOD. DATE: 22-AUG-2003

BID DOCUMENTS

3/3

ATTACHMENT 4

TABLE I - DISCHARGE/OUTFALL DESCRIPTION

TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001	36 46 33 76 27 30	UF membrane concentrate, manganese contactor backwash water, membrane cleaning solution, plant sanitary effluent, strainer backwash waste and sump pump discharge	Sedimentation, dechlorination, and post aeration	1.0 MGD

(1) List operations contributing to flow
(2) Give brief description, unit by unit
(3) Give maximum 30-day average flow for industry and design flow for municipal

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 001
Outfall Description: discharge from water treatment plant process
SIC CODE: 4941

(x) Final Limits ( ) Interim Limits Effective Dates - From: Issuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Week	EST
pH (S.U.)	3		NA	6.0	9.0	1/Month	Grab
TSS (mg/l)	3		30	NA	60	1/Month	5G/8HC
Dissolved Oxygen (mg/l)	3		NA	4.0	NA	1/Month	GRAB
Total Phosphorus (mg/l)	3		2.0	NA	NA	1/Month	5G/8HC
Total Nitrogen (mg/l)	3		NL	NA	NA	1/Month	5G/8HC
Total Dissolved Solids (mg/l)	3		NL	NA	NL	1/Month	5G/8HC
Total Residual Chlorine (ug/l) [a]	3		NA	NA	11	1/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

5G/8HC = Eight-Hour composite consisting of grab samples collected at hourly intervals until the discharge ceases or until a minimum of 5 grab samples have been collected.
Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.

The bases for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

Attachment 6
Effluent Limitations & Monitoring Rationale

Outfall 001:

This outfall discharges primarily treated UF membrane concentrate. Other plant flow that will periodically contribute to the effluent flow includes treated manganese removal contactor waste backwash water, neutralized membrane cleaning solutions, treated sanitary effluent, strainer backwash waste and sump pump discharge. The treated sanitary flow is estimated to be 0.004 mgd and it is considered very small in comparison to the 1 mgd plant flow. Per our discussion with the Health Department in September of 2003, fecal coliform monitoring should not be required.

Flow: No limit; Monthly average and maximum reporting at 1/week frequency. Flow shall be estimated in units of million gallons per day (MGD). Flow is a universal requirement of VPDES permits and is necessary to help establish quantitative impacts of pollutants on the receiving water. Units are in MGD because the waste stream is a process waste that is a continuous flow. This requirement is standard for VPDES permits for industrial facilities.

pH: Minimum limit 6.0 S.U. and maximum limit 9.0 S.U. Monitoring frequency at 1/month. Like flow, pH is a universally required parameter in VPDES permits. It is a fundamental measure of water quality. Although the range for pH set is not water quality based, best professional judgment suggests the range should be that of natural waters. . This is based on best professional judgement to protect water quality in the receiving stream

TSS: Monthly average limit of 30 mg/l and maximum limit of 60 mg/l. Monitoring frequency is 1/month This is based on best professional judgement to address the discharge from a conventional water treatment plant (the primary contaminant removed during water treatment is solids).

DO: Minimum limit of 4.0 mg/l. Monitoring frequency is at 1/month. This is based on best professional judgement to protect water quality in the receiving stream and is also in accordance with water quality standards.

Total Phosphorus: Monthly average limit of 2.0 mg/l. Monitoring frequency is at 1/month. This requirement is in accordance with the VPDES Permit Manual and Policy for Nutrient Enriched Waters.

Total Nitrogen: Monthly average reporting at 1/month monitoring frequency. This requirement is in accordance with the VPDES Permit Manual and Policy for Nutrient Enriched Waters.

Total Dissolved Solids: Monthly average and maximum reporting at 1/month monitoring frequency. This requirement is based on best professional judgement to ensure water quality in the receiving stream.

Total Residual Chlorine: Maximum limit of 11 ug/l. Monitoring frequency is at 1/month. This limit is based on best professional judgment to protect water quality in the receiving stream.

LAKE CITIZEN WTP

V. Dee

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM ~~BACKGROUND~~ DATA (~~Expected~~ Value*) DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
					1st dataset		2nd dataset							
METALS														
Antimony			14	4300	<0.10		0.44							
Arsenic	340	150	50		0.3		0.4							
Arsenic III	360	190			0.3		0.5							
Barium			2000		37		12							
Cadmium	3.9(1)	1.1(1)			<0.05		<.05							
Chromium III	~~570~~ 1700(1)	~~74~~ 210(1)	100		<2		2							
Chromium VI	16	11			<2		2							
Copper	~~13~~ 18(1)	~~9~~ 12(1)	1300		2.9		9.1							
Iron			300		0.07		4300							
Lead	120(1)	14(1)	15		<0.1		0.3							
Manganese			50		267		68							
Mercury	~~1.4~~ 2.4	~~0.77~~ .012	.052	.053	<0.1		<0.1							
Nickel	180(1)	20(1)	610	4600	<10		<10							
Selenium	20	5	170	11000	0.1		0.2							
Silver	~~3.4~~ 4.1(1)				<5	X	? <5		QL?					
Zinc	120(1)	~~120~~ 110(1)	5000		<15		19							
PESTICIDES/PCB'S														
Aldrin	3	.3	.0013	.0014										
Chlordane	2.4	.0043	.0058	.0059										
Chlorpyrifos (Dursban)	.083	.041				NOT performed								

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
Pentachloro-phenol	**	**	2.8	82										
Phenol			21000	4600000										
2,4,6-Trichloro-phenol			21	65	Data									
MISCELLANEOUS														
Ammonia (as NH3-N)	***	***			380	<	?							
Chlorides	860000	230000	250000		27									
Chlorine, Total Residual	19	11												
Cyanide	22	5.2	700	215000	<10	<	QL							
Dioxin				1.2(2)	ND									
Fecal Coliform (N/CML)					<2									
Foaming Agents (as MBAS)			500		<0.2									
Hydrogen Sulfide		2			<0.3									
Nitrate			10000		<0.05									
Sulfate			250000		30									
Total Dissolved Solids			500000											
Tributyltin	.46	.026			ND									
Xylenes total					<2									

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
DDD			.0083	.0084										
DDE			.0059	.0059										
DDT	1.1	.001	.0059	.0059										
Demeton		.1												
2,4-dichloro-phenoxy acetic acid (2,4-D)			71											
Dieldrin	2.5	.0019	.0014	.0014										
Endosulfan	.22	.056	110	240										
Endrin	.18	.0023	.76	.81										
Guthion		.01												
Heptachlor	.52	.0038	.0021	.0021										
Hexachloro-cyclohexane (Lindane)	2	.08	7	25										
Kepone		0												
Malathion		.1												
Methoxychlor		.03	40											
Mirex		0												
Parathion	.065	.013												
PCB-1242		.014	.00044	.00045										
PCB-1254		.014	.00044	.00045										
PCB-1221		.014	.00044	.00045										
PCB-1232		.014	.00044	.00045										
PCB-1248		.014	.00044	.00045										

Not performed

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
PCB-1260		.014	.00044	.00045										
PCB-1016		.014	.00044	.00045										
Toxaphene	.73	.0002	.0073	.0075										
2-(2,4,5-Trichlor-phenoxy) propionic acid (Silvex)			50											
BASE NEUTRAL EXTRACTABLES														
Acenaphthene			1200	2700										
Anthracene			9600	110000										
Benzo(a) anthracene			.044	.49										
Benzo(b) fluoranthene			.044	.49										
Benzo(k) fluoranthene			.044	.49										
Benzo(a) pyrene			.044	.49										
Butyl benzyl phthalate			3000	5200										
Chrysene			.044	.49										
Dibenz(a,h) anthracene			.044	.49										
Dibutyl phthalate			2700	12000										
1,2-Dichloro-benzene			2700	17000										

Not performed

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
1,3-Dichloro-benzene			400	2600										
1,4-Dichloro-benzene			400	2600										
Diethyl phthalate			23000	120000										
Di-2-Ethylhexyl phthalate			18	59										
2,4-Dinitro-toluene			1.1	91										
Fluoranthene			300	370										
Fluorene			1300	14000										
Indeno (1,2,3-cd) pyrene			.044	.49										
Isophorone			6900	490000										
Nitrobenzene			17	1900										
Pyrene			960	11000										
1,2,4 Trichloro-benzene			260	950										
VOLATILES														
Benzene			12	710										
Bromoform			44	3600										
Carbon Tetrachloride			2.5	45										

not performed

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
Chloro-dibromo-methane			690	57000										
Chloroform			57	4700										
Dichloro-methane			47	16000										
Dichloro-bromomethane			5.6	460										
1,2-Dichloro-ethane			3.8	990										
1,1-Dichloro-ethylene			310	17000										
Ethylbenzene			3100	29000										
Monochloro-benzene			680	21000										
Tetrachloro-ethylene			320	3500										
Toluene			6800	200000										
Trichloro-ethylene			27	810										
Vinyl Chloride			20	5300										
ACIDS EXTRACTABLES														
2-Chloro-phenol			120	400										
2,4 Dichloro-phenol			93	790										
2,4 Dimethyl-phenol			540	2300										

Not performed

Project Background

The Lake Gaston Water Treatment Plant (LGWTP) will serve the City of Chesapeake, Virginia. The proposed plant will be located on a new 40-acre site situated west of the Hampton Roads Airport, as shown in Figure 1-1. Potable water produced by the LGWTP will supplement the existing Northwest River Water Treatment Plant production capacity.

The LGWTP will treat both surface water transported directly from Norfolk's Western Lake water supply system, located in Suffolk, VA, and Norfolk Western Lake water temporarily stored in the City of Chesapeake's In-Town Lakes. The firm surface water treatment capacity of the LGWTP (with one treatment unit out of service) will be 10.0 mgd. This corresponds to the maximum withdrawal rate allowed from the Norfolk's Western Lake water supply system, as defined in a regional water supply agreement signed by Virginia Beach, Chesapeake, Norfolk, and others. With all treatment units in operation, the LGWTP will be capable of treating a maximum flow of 12.0 mgd of raw water.

In addition to the raw surface water treated by the LGWTP, well water withdrawn from the three existing Western Branch wells, located adjacent to the LGWTP site, will be disinfected and blended with treated surface water at the downstream end of the LGWTP. The well water will be disinfected separately and then blended with disinfected surface water. Finished water chemicals designed to control finished water corrosivity and pH will be added downstream of the well water blend point.

In addition to producing potable water, the proposed LGWTP will also generate a waste effluent flow stream. This flow stream will consist primarily of treated UF membrane concentrate. Approximately 5-percent of the raw surface water flow treated by the membranes for organics and turbidity removal will be wasted from the treatment process in the form of membrane concentrate. Other plant flow streams that will also contribute to the waste effluent flow generated by the plant include treated manganese removal contactor waste backwash water, neutralized membrane cleaning solutions, and treated sanitary effluent.

Process Description

The attached process schematic (Figure 2D-1) shows the treatment processes that will be utilized as part of the new LGWTP. The flows indicated on this schematic are based on an average raw water flow rate of 10 mgd. The drinking water treatment processes to be provided at the plant will include rapid mix, flocculation, membrane filtration, manganese removal contactors, disinfection, and finished water chemical stabilization. Sulfuric acid, ferric chloride and sodium hydroxide will be added at the rapid mix step for coagulation and pH adjustment. Powdered Activated Carbon (PAC) will be added at the flocculation step for control of taste and odors. Disinfection will be accomplished by adding sodium hypochlorite upstream of the Manganese Removal Contactors. The chlorine also oxidizes manganese for removal in the Manganese Removal Contactors.

Following disinfection, the treated drinking water flow stream will be dosed with ammonia to form chloramines which serve as a secondary disinfectant for the distribution system. Zinc orthophosphate will also be added to the finished drinking water as a corrosion control agent.

The LGWTP is designed to achieve a net surface water treatment recovery of 95-percent (i.e., 10.0 mgd raw water flow will yield 9.5 mgd of finished water). The remaining 5-percent of the influent flow, designated UF membrane concentrate, will be discharged continuously to the Sludge Thickener. Here, the particles contained in the flow stream will be allowed to settle out of solution. Overflow from the Sludge Thickener will be discharged to the Plant Waste Basin, where supplemental settling and blending with other waste streams will occur. Thickened residuals removed from the bottom of the Sludge Thickener will be dewatered in a centrifuge and hauled to the City's existing residuals disposal site, located near the existing Northwest River WTP. Table 1 (located at the end of this description) is a summary of the design criteria used for the plant's solids processing equipment.

Other treatment process waste flow streams that will periodically contribute to the plant effluent flow stream include the following:

- The Manganese Removal Contactors will be backwashed once per week for each of the three contactors. Waste backwash water, containing particulate manganese particles, will flow by gravity to the Plant Waste Basin, where the particles will be settled out of solution. Supernatant from the Plant Waste Basin will be discharged to the effluent pump station.

- The submerged membranes used to treat the surface water will be periodically cleaned with citric acid or sodium hypochlorite to remove any foulants from the surface of the membranes and restore their design operating flux. Each of the six membrane trains is anticipated to require cleaning approximately once per month. During each membrane cleaning event, the membrane train will be soaked in a solution of either citric acid or sodium hypochlorite. At the end of the required soaking period, the spent cleaning solution will be pumped from the membrane tank to a neutralization tank, where the pH and chlorine concentrations will be neutralized with sodium hydroxide and/or sodium bisulfite. Following neutralization, the neutralized cleaning solution will be pumped to the Sludge Thickener, where solids will be settled out of solution. Overflow from the Sludge Thickener will be discharged to the Plant Waste Basin where second stage settling will occur.

- The sanitary waste produced on site will be treated in a two stage septic tank system before being pumped at a continuous rate of 11 gpm to the Sludge Thickener. The treated flow discharged from the septic tanks will be disinfected with sodium hypochlorite on its way to the Sludge Thickener. Once in the Sludge Thickener, any remaining solids will be removed by settling. Overflow from the Sludge Thickener will flow to the Plant Waste Basin and combine with other settled waste flow steams, as discussed above.

- Centrate from the residuals dewatering and residuals from the Plant Waste Basin will be recycled back to the Sludge Thickener, where solids will be removed from solution. Overflow from the Plant Waste Basin will be discharged to the Effluent Pump Station.

Settled water discharged from the Plant Waste Basin will include a combination of settled water flows associated with the various waste streams identified above. Any residual chlorine present in the combined waste stream discharged from the Plant Waste Basin will be neutralized with sodium bisulfite as the flow passes through the Effluent Pump Station (located downstream of the Plant Waste Basin). Following pumping, the combined effluent flow will be aerated. The aerated waste effluent flow stream will be pumped to an unnamed tributary of Goose Creek, located on the plant site. The effluent flow rate is expected to range between 0.4 and 1.0 mgd, depending on how many membrane trains are in service and whether or not a contactor is being backwashed or a membrane train is being cleaned.

The pH of the plant effluent will be controlled to ensure that it is maintained within an acceptable range.

Figures 1-1, 1-2, and 1-3 in Form 1 of this application show the site location, discharge location and site plan. The location of all proposed chemical storage facilities is also shown on Figure 1-3. Table 2 (located at the end of this description) provides a listing of all proposed chemicals and the estimated storage volumes associated with each chemical. In addition, Attachment B contains MSDS sheets for all of the chemicals anticipated to be stored on-site.

Membrane Treatment Pilot Program

A pilot study was conducted between November 2001 and March 2002 to evaluate the feasibility of using direct membrane filtration technology for the proposed LGWTP. The pilot study evaluated two different membrane systems under side-by-side test conditions.

As part of the pilot study, effluent samples were taken and analyzed and follow-up jar tests were conducted on settled effluent to simulate the effect of the gravity thickening process. The data gathered from this analysis was used to estimate the values provided in Section V of Form 2D.

Discharge Location

Figure 1-1 and 1-2 in Form 1 of this application identify the location of the LGWTP and the proposed discharge location on the northwest corner of the plant site. The plant effluent will be discharged to an unnamed tributary to Goose Creek that runs along the northwest border of the plant site. Attachment C contains a memorandum that summarizes the water quality of the unnamed tributary to Goose Creek and discusses data supporting a Tier 1 designation.

Site Stormwater

The site stormwater will be discharged to a ditch located on the Northeast portion of the site (See Figure 1-2 in Form 1). As shown on Figure 1-2, the ditch that the stormwater empties into eventually combines with the plant effluent discharge and the combined discharges flow into the unnamed Tributary to Goose Creek.

Lake Gaston Water Treatment Plant Sludge Handling Process

The Sludge Thickener is used to receive and thicken the solids produced at the Lake Gaston WTP. The sludge thickener permits the concentration of the solids to increase prior to subsequent processing, and also provides additional storage volume for the solids, which could become necessary during high raw turbidity events.

The Sludge Thickener has an inside diameter of 45 feet, a side wall depth of 18 feet and a maximum storage volume of 214,000 gallons. The various solids flow streams are collected in the Thickener Influent box. From the Influent Box, the combined flows are directed to the 12" Sludge Influent Pipe. The influent pipe is directed up the Thickener dry center column to the influent well, which insures uniform flow distribution in the tank. Two rotating truss arms direct the thickened solids to the center sludge sump at the bottom of the tank, where a 4" thick sludge pipe then conveys the solids to the Centrifuge Feed Pumps.

The Centrifuge System dewaters thickened residuals from the Sludge Thickener prior to hauling to the City of Chesapeake Disposal Site on Indian Creek Road (please see map provided). The Centrifuge System consists of the Sludge Grinder, Centrifuge Feed Pumps, the Centrifuge, the Concentrate Pump Station, and Truck Unloading Station.

The Sludge Grinder grinds large debris to prevent interference with the Centrifuge. The Grinder consists of two shafts, stacked with intermeshing cutters and spacers, which rotate in opposite directions. Two progressing cavity Moyno® Centrifuge Feed Pumps are used for pumping Sludge Thickener residuals to the Centrifuge. Each pump has a design capacity of approximately 120 gpm, and is equipped with an adjustable speed drive to permit the operator adjustment of the pump speed, and in turn the pump capacity.

The Centrifuge, an Alfa Laval ALDEC 40, is used to process the thickened solids from the Sludge Thickener to increase the solids concentration of the sludge prior to off-site disposal. Two submersible pumps in the Concentrate Pump Station convey the Centrifuge's centrate back to the Sludge Thickener.

A Polymer System is employed to enhance the dewatering process. Polymer is fed to the piping upstream of the Centrifuge to increase the capture rate.

Solids dewatered to approximately 8 to 10 percent solids are then collected in a roll off container located directly beneath the centrifuge. Full boxes are then transported to the Disposal Site for emptying.

ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1.a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

1.b. Nutrient Enriched Waters Reopener

Rationale: The Policy for Nutrient Enriched Waters, 9 VAC 25-40 -10 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future total phosphorus and total nitrogen limits may be needed.

2. Operations & Maintenance (O & M) Manual

Rationale: The State Water Control Law, Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on state waters. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition, 40 CFR 122.41 (e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

3. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

4. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

5. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

6. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE
continued

7. SLUDGE MANAGEMENT PLAN

Rationale: Sludge from filter backwash and the water treatment process of this facility is disposed of in accordance with the Sludge Management Plan (SMP) submitted with the application.
The VPDES Permit Regulation, 9 VAC 25-31-420, and 40 CFR 503.1 specify the purpose and applicability for sludge management plans. The VPDES Permit Regulation, 9 VAC 25-31-100 J.4., also sets forth certain detailed information which must be included in a sludge management plan. The VPDES sludge permit application form and its attachments constitute the sludge management plan and will be considered for approval with the VPDES permit. In addition, the Biosolids Use Regulation, 12 VAC 5-585-330 and 340, specifies the general purpose and control requirements for an O&M manual in order to facilitate proper O&M of the facilities to meet the requirements of the regulation.

8. TOXICS MANAGEMENT PROGRAM (TMP)

Rationale: To determine the need for pollutant specific and/or whole effluent toxicity limits as may be required by the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d). See Attachment 9 of this fact sheet for additional justification.

ATTACHMENT _8_

TOXICS MONITORING/TOXICS REDUCTION/ WET LIMIT RATIONALE

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: Toxic Management Program (TMP) Monitoring for Lake Gaston WTP (VA0091405)

TO: Deanna Austin

FROM: Bob Smithson

DATE: February 4, 2009

COPIES: TRO File (PPP #1111)

Lake Gaston WTP is an ultra-filtration (UF) facility that produces water for public distribution. Waste streams from this facility include UF membrane concentrate, manganese contactors backwash waster, membrane cleaning solution, strainer backwash waste and plant sanitary discharges. The average flow is 1 MGD to an unnamed tributary of Goose Creek at outfall 001.

The facility has sampled for both acute and chronic toxicity on an annual basis. Data collected during the past permit term (5/04-5/09) are shown in the table below.

DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	LAB
3rd Quarterly Acute	C.d.	3/13/06	100	95	1	JR Reed
3rd Quarterly Acute	P.p.	3/13/06	100	95	1	JR Reed
4th Quarterly Acute	C.d.	6/7/06	100	70	1	JR Reed
4th Quarterly Acute	P.p.	6/7/06	100	100	1	JR Reed
5th Quarterly Acute	C.d.	9/15/06	100	100	1	JR Reed
5th Quarterly Acute	P.p.	9/15/06	100	100	1	JR Reed
1st Annual Acute	C.d.	11/15/06	<6.25	0	>16	JR Reed
1st Annual Acute	P.p.	11/15/06	60	15	1.67	JR Reed
2nd Annual Acute	C.d.	3/6/07	100	100	1	JR Reed
2nd Annual Acute	P.p.	3/6/07	100	100	1	JR Reed
Annual for Q make-up Acute	C.d.	9/18/07	100	100	1	JR Reed
Annual for Q make-up Acute	P.p.	9/18/07	100	100	1	JR Reed
3rd Annual Acute	C.d.	10/27/08	100	100	1	QC Labs, PA
3rd Annual Acute	P.p.	10/27/08	100	100	1	QC Labs, PA

DESCRIPT	SPECIES	SAMPLEDT	SURVIVAL	NOEC	TU	LAB
Quarterly Chronic	C.d.	3/13/06	100	100	1	JR Reed
Quarterly Chronic	P.p.	3/13/06	100	100	1	JR Reed
Quarterly Chronic	C.d.	6/5/06	100	100	1	JR Reed
Quarterly Chronic	P.p.	6/5/06	100	100	1	JR Reed
Quarterly Chronic	C.d.	9/13/06	100	50	2	JR Reed

Quarterly Chronic	P.p.	9/13/06	100	50	2	JR Reed
1st Annual Chronic	C.d.	11/13/06	0	0	>16	JR Reed
1st Annual Chronic	P.p.	11/13/06	12.5	6.25	16	JR Reed
2nd Annual Chronic	C.d.	3/4/07	100	100	1	JR Reed
2nd Annual Chronic	P.p.	3/4/07	100	100	1	JR Reed
Annual for Q make-up Chronic	C.d.	9/17/07	100	100	1	JR Reed
Annual for Q make-up Chronic	P.p.	9/17/07	100	100	1	JR Reed
Extra Chronic	C.d.	8/5/08	100	100	1	JR Reed
Extra Chronic	P.p.	8/5/08	100	25	4	JR Reed
3rd Annual Chronic	C.d.	10/27/08	100	100	1	QC Labs, PA
3rd Annual Chronic	P.p.	10/27/08	100	100	1	QC Labs, PA

This plant began operation in 2006. There has been one failure of acute toxicity at the facility (11/06) and three failures of chronic toxicity since the start of the plant with two of the failures taking place in 2006. The most recent failure of chronic toxicity was in 8/08. For the 8/08 sample, the vertebrate species failed. In all other failures, the invertebrate was more sensitive, therefore a most sensitive species determination cannot be made at this time.

Since the plant has only been in operation a short period of time and most of the toxicity failures started in the first year of plant operation, the facility will be allowed to continue to sample on a quarterly basis for two years without a Whole Effluent Toxicity (WET) limit. If at the end of the 2 year period, more than 25% of the results are failures, the permit will be opened and a WET limit of 1.0 TUa and/or TUc will be added. DEQ guidance document 00-2012 provides the basis for the addition of limits when the failure rate is 25% or greater. If at the end of the two year period, the facility has not failed more than 25% of the samples taken, the facility will continue to monitor acute and chronic toxicity on a semi-annual basis. This continuation of toxicity testing on a quarterly basis for two years will help determine if the toxicity failures were plant start-up related or an operational issue that will require a WET limit.

By allowing Lake Gaston to sample quarterly during the first two years of the permit, it will reduce the amount of time they may have to meet a WET limit if one is imposed at the end of the two years. Typically a facility is given a four year schedule to meet the WET limit, however, since Lake Gaston will continue to sample and be without a WET limit for the first two years of the permit, if a WET limit is imposed a 2 year schedule will be given.

It is recommended that the following toxics language is incorporated into the Lake Gaston WTP, VPDES permit number (VA0091405).

TOXICS MANAGEMENT PROGRAM

1. Biological Monitoring:

a. In accordance with the schedule in 2. below, the permittee shall conduct **quarterly acute and chronic** toxicity tests for the first two years of this permit. The permittee shall collect 5 grab samples over an 8 hour period for a composite sample of final effluent from outfall 001. Toxicity samples shall be taken at the same time as the monthly monitoring in Part I.A. of this permit.

The acute tests to use shall be:

48-Hour Static Acute test using **Ceriodaphnia dubia (C.d.)**

48-Hour Static Acute test using **Pimephales promelas (P.p.)**

The acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for calculation of a valid LC_{50}. Express as the results as TU_a (Acute Toxic Units) by dividing $100/LC_{50}$ for DMR reporting.

The chronic test to use shall be:

3-Brood Static Renewal Survival and Reproduction test using **Ceriodaphnia dubia (C.d.)**

7-Day Static Renewal Survival and Growth using **Pimephales promelas (P.p.)**

The chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable, and a retest will have to be performed. Express the test NOEC as TU_c (Chronic Toxic Units), by dividing 100/NOEC for DMR reporting. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of effluent toxicity.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

b. The test dilutions should be able to determine compliance with the following endpoints:

(1) Acute LC_{50} of 100% equivalent to a TU_a of 1.0

(2) Chronic NOEC of 100% of equivalent to a TU_c of 1.0

c. The toxicity test data will be evaluated for reasonable potential using the endpoints listed above in 1.b., at the end of the 2nd year of the permit. Should evaluation of the data indicate that a limit is needed, the permit will be modified to incorporate a WET limit and a 2-year schedule of compliance; and the toxicity tests of 1.a. may be discontinued. If evaluation of the data does not show reasonable potential at the end of the 2nd year of the permit, DEQ will notify the facility in writing that toxicity testing shall continue using the reporting schedule in 2.c. below.

d. All applicable data will be reevaluated for reasonable potential at the end of the permit term.

e. If, in the testing according to C.1., any toxicity tests are invalidated, the tests shall be repeated within the testing period that the original test was taken, or if already past that period, within thirty(30) days of notification.

2. Reporting Schedule:

a. The permittee shall report the results and supply **one** complete copy of the toxicity test reports specified in this Toxics Management Program to the Tidewater Regional Office. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody. All data shall be submitted by the 10th of the month following sampling. Sampling and reporting shall be in accordance with the following schedule:

b. The following reporting schedule shall be used until the end of the 2nd year of the permit.

(a)	**Conduct first quarterly acute and chronic biological tests using C.d. and P.p.**	**By September 30, 2009**
(b)	**Submit results of biological test**	**By the 10th of the month following sampling but no later than October 10, 2009**
(c)	**Conduct second quarterly acute and chronic biological tests using C.d. and P.p.**	**By December 31, 2009**
(d)	**Submit results of all biological tests**	**By the 10th of the month following sampling but no later than January 10, 2010**
(e)	**Conduct third quarterly acute and chronic biological tests using C.d. and P.p.**	**By March 31, 2010**

	biological test	following sampling but no later than April 10, 2010
(g)	Conduct fourth quarterly acute and chronic biological tests using C.d. and P.p.	By June 30, 2010
(h)	Submit results of all biological tests	By the 10th of the month following sampling but no later than July 10, 2010
(i)	Conduct fifth quarterly acute and chronic biological tests using C.d. and P.p.	By September 30, 2010
(j)	Submit results of biological test	By the 10th of the month following sampling but no later than October 10, 2010
(k)	Conduct sixth quarterly acute and chronic biological tests using C.d. and P.p.	By December 31, 2010
(l)	Submit results of all biological tests	By the 10th of the month following sampling but no later than January 10, 2011
(m)	Conduct seventh quarterly acute and chronic biological tests using C.d. and P.p.	By March 31, 2011
(n)	Submit results of biological test	By the 10th of the month following sampling but no later than April 10, 2011
(o)	Conduct eighth quarterly acute and chronic biological tests using C.d. and P.p.	By June 30, 2011
(p)	Submit results of all biological tests	By the 10th of the month following sampling but no later than July 10, 2011

c. The following reporting schedule shall be used from the 3rd year until permit expiration. Semi-annual periods are January 1-June 30 and July 1-December 31. The first semi-annual period begins July 1, 2011.

(a)	Conduct first semi-annual acute and chronic biological tests using C.d. and P.p.	By December 31, 2011
(b)	Submit results of the biological tests	By the 10th of the month following sampling but no later

		than January 10, 2012
(c)	Conduct second semi-annual acute and chronic biological tests using C.d. and P.p.	By June 30, 2012
(d)	Submit results of the biological test	By the 10th of the month following sampling but no later than July 10, 2012
(e)	Conduct third semi-annual acute and chronic biological tests using C.d. and P.p.	By December 31, 2012
(f)	Submit results of the biological tests	By the 10th of the month following sampling but no later than January 10, 2013
(g)	Conduct fourth semi-annual acute and chronic biological tests using C.d. and P.p.	By June 30, 2013
(h)	Submit results of the biological test	By the 10th of the month following sampling but no later than July 10, 2013
(i)	Conduct fifth semi-annual acute and chronic biological tests using C.d. and P.p.	By December 31, 2013
(j)	Submit results of the biological tests	By the 10th of the month following sampling but no later than January 10, 2014
(k)	Conduct sixth semi-annual acute and chronic biological tests using C.d. and P.p.	By June 30, 2014
(l)	Submit results of the biological test	By the 10th of the month following sampling but no later than July 10, 2014

ATTACHMENT _9_

MATERIAL STORED

TABLE 2
Lake Gaston Water Treatment Plant
Volume of Chemicals To Be Stored on Site

Chemical	Total Storage Volume (gallons)	# of tanks	Volume per tank (gallons)	mg/L Estimated in Effluent	Maximum lb/day Estimated in Effluent
Powdered Activated Carbon (PAC)	59,400	2	29,700	0	0
Sodium Hydroxide (NA)	59,200	2	29,600	1 to 10	83
Sodium Hypochlorite (SH)	19,000	2	9,500	1 to 4	33
Sulfuric Acid (SA)	4,000	1	4,000	0.1 to 2	17
Zinc Orthophosphate (ZO)	4,300	1	4,300	0	0
Citric Acid (CA)	2,400	1	2,400	1 to 10	83
Aqua-Ammonia (AM)	6,800	1	6,800	0	0
Ferric Chloride (FC)	25,000	2	12,500	2 to 20	167
Sodium Bisulfite (SB)	5 to 7 55-gallon drums			1 to 4	33
Polymer (PS)	5 to 7 55-gallon drums				

ATTACHMENT 10

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING

M E M O R A N D U M

Department of Environmental Quality
Tidewater Regional Office

5636 Southern Boulevard — Virginia Beach, VA 23462

SUBJECT: VPDES Application Requests

~~TO:~~ Stephen Cioccia, TRO

~~FROM:~~ Bob Smithson, TRO

DATE: 7/8/08

COPIES: TRO File - facility # 1111, PPP

An application has been received for the following facility:

Lake Gaston Water Treatment Plant

Topo Map Name: Bowers Hill 35C VPDES #: VA0091405

Receiving Stream: X Trib to Goose Creek

Attached is a Topographic Map showing facility boundaries and outfall location(s).

Attached is a STORET Request Form if STORET data is requested.

We request the following information from you:

1. X Tier Determination. Tier: 1 (discharge to receiving stream with 7Q10 = 0 = low flow stream)
   Please include a basis for the tier determination. Attachment 1
2. X STORET Data and STORET Station Location(s)
   No data available for X-trib or Goose Creek
3. X Is this facility mentioned in a Management Plan?
   ✓ No _____ Yes _____ No, but will be included when the Plan is updated.
4. X Are limits contained in a Management Plan?
   ✓ No _____ Yes (If Yes, Please include the basis for the limits.)
5. X Does this discharge go to a 303(d) stream segment? No

Return Due Date: 7/22/08 Date Returned: 7/15/08

STORET Station: N/A

STORET Station: _____

Until further guidance is provided by OWRM Permits, assessment of waters for NH_3 should be based upon OWRM Guidance No. 93-015 from Larry G. Lawson, dated June 22, 1993.

The above guidance specifies that the ambient NH_3 data should be compared to the NH_3 standard (calculated using 90th percentile of ambient data for pH and temperature of that segment) and by using the "STANDARDS.EXE Program" developed by OWRM Permits Modelling. (These environmental conditions are considered critical design conditions to protect water quality and to comply with WQS.) If the 97th percentile of the in-stream data is greater than either of the calculated NH_3 standards (chronic or acute), then OWRM considers the standard is being violated and the segment is WQL.

2.4.7 Wasteload Allocations Where The 7Q10 Is Zero *Or Minimal*

A discharge to a water course with a 7Q10 of zero or near zero would be required to have effluent limits that would comply with water quality standards, at a minimum. The discharge would have to be "self sustaining" so to comply with water quality standards. Therefore, the discharge would be WQL and the receiving water course with a 7Q10 of zero near zero would be considered a tier 1 segment.

Dry-ditch = Tier 1

A discharge to a tier 1 water that empties into a tier 2 water would have to be evaluated for antidegradation at the point of confluence of the two water courses, if the discharge is in close enough proximity to impact the tier 2 water. In the above scenario, antidegradation requirements to protect tier 2 waters may apply to a discharge to a tier 1 water. Therefore, effluent limits may be more stringent than required by the numerical water quality standards.

If a discharge occurs to a dry ditch or tributary that empties into a free flowing stream and the distance from the discharge to the next confluence is too short to model (based upon the current modelling programs), then the discharge should be modelled as if it occurs directly to the free flowing stream.

2.4.8 Estuaries - Wasteload Allocations & TMDL Development

Similar to freshwater streams, water quality wasteload allocations (WQWLAs) and TMDLs in all tidal influenced waters will be expressed as a mass limitation for the conventional parameters (BOD_5, $cBOD_5$, TKN, and NH_3) and as a concentration for toxics.

Tidal freshwater segments and transition zone segments identified

Attachment 1-1

Tier 1 Justification for Low Flow Streams

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER DIVISION

OFFICE OF WATER RESOURCE MANAGEMENT

(SECOND DRAFT)

GUIDANCE MANUAL

FOR THE

VIRGINIA WATER QUALITY MANAGEMENT PLAN

March 4, 1994

Attachment 1-2

ATTACHMENT 11

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

TABLE III(a)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
Standard special condition: Sludge Management Plan	Added based upon VPDES manual and BPJ when sludges are produced and a plan is required for proper disposal.	RES 2/5/09
Standard special condition: Water Quality Monitoring	Removed because previous condition was satisfied	RES 2/5/09

TABLE III(b)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

Not applicable

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001					

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

Revised 2/2003

ATTACHMENT 12

NPDES INDUSTRIAL PERMIT RATING WORKSHEET
AND
EPA PERMIT CHECKLIST

NPDES Permit Rating Work Sheet

___ Regular Addition
___ Discretionary Addition
___ Score change, but no status change
___ Deletion

NPDES NO: |_V_|_A_|_0_|_0_|_9_|_1_|_4|_0_|_5_|

Facility Name:

|_L_|_A_|_K_|_E_|___|_G|_A_|_S_|_T_|_O_|_N_|___|_W_|_T|_P_|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|

City: |_C_|_H_|_E_|_S_|_A|_P_|_E_|_A_|_K_|_E_|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|

Receiving Water: |_U|_N|_N_|_A_|_M_|_E_|_D_|___|__T|_R_|_I_|_B_|___|_T_|_O_|___|_G_|_O_|_O_|_S|_E_|___|_C_|_R_|_E_|_E_|_K_|___|___|

Reach Number: |___|___|___|___|___|___|___|___|___|___|___|

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

___ YES: score is 600 (stop here) __X NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

___ YES; score is 700 (stop here)
_X_ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: |___|___|___|___| Primary SIC Code: |_4_|_9_|_4_|_1_|

Other SIC Codes: |___|___|___|___| |___|___|___|___| |___|___|___|___| |___|___|___|___|

Industrial Subcategory Code: |___|___|___| (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	15	X__ 7.	7	35
___ 1.	1	5	___ 4.	4	20	___ 8.	8	40
___ 2.	2	10	___ 5.	5	25	___ 9.	9	45
			___ 6.	6	30	___ 10.	10	50

Code Number Checked: |___|_7_|

Total Points Factor 1: |_3__|_5__|

FACTOR 2: Flow/Stream Flow Volume *(Complete Either Section A or Section B; check only one)*

Section A--Wastewater Flow Only Considered

Wastewater Type (See Instructions)			Code	Points
Type I:	Flow < 5 MGD	___	11	0
	Flow 5 to 10 MGD	___	12	10
	Flow > 10 to 50 MGD	___	13	20
	Flow > 50 MGD	___	14	30
Type II:	Flow < 1 MGD	_X__	21	10
	Flow 1 to 5 MGD	___	22	20
	Flow > 5 to 10 MGD	___	23	30
	Flow > 10 MGD	___	24	50
Type III:	Flow < 1 MGD	___	31	0
	Flow 1 to 5 MGD	___	32	10
	Flow > 5 to 10 MGD	___	33	20
	Flow > 10 MGD	___	34	30

Section B--Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10%	___	41	0
	> 10% to < 50%	___	42	10
	> 50%	___	43	20
Type II:	<10%	___	51	0
	> 10% to < 50%	___	52	20
	> 50%	___	53	30

Code Checked from Section A or B: |_2__|_1__|

Total Points Factor 2: |_1__|_0__|

NPDES No.: |_V_|_A__|_0__|_0__|_9_|_1_|_4_|_0_|_5_|

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ___ BOD ___ COD ___ Other:_____

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: NA |___|

Points Scored: |___|___|

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
_X_	100 to 1000 lbs/day	2	5
___	>1000 to 5000 lbs/day	3	15
___	>5000 lbs/day	4	20

Code Checked: |_2__|

Points Scored: |__|_5__|

C. Nitrogen Pollutant: (check one) _._ Ammonia ___ Other: _____

Permit Limits: (check one)		Code	Points
___	< 300 lbs/day	1	0
___	300 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: NA |___|

Points Scored: |___|_0_|

Total Points Factor 3: |___|_5_|

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

___ YES (if yes, check toxicity potential number below)
_X__ NO (if no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	0	___ 7.	7	15
___ 1.	1	0	___ 4.	4	0	___ 8.	8	20
___ 2.	2	0	___ 5.	5	5	___ 9.	9	25
			___ 6.	6	10	___ 10.	10	30

Code Number Checked: |NA|___|

Total Points Factor 4: |___|___|

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?

		Code	Points
___	Yes	1	10
_X_	No	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

		Code	Points
_X_	Yes	1	0
___	No	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity? repeated test failure

		Code	Points
___	Yes	1	10
X	No	2	0

Code Number Checked: A |_2__| B |_1_| C |_2_|

Points Factor 5: A |___|_0_| + B |_0_| + C |___|_0_| = ___|_0_| **TOTAL**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2): |_2|_1| *Enter the multiplication factor that corresponds to the flow code:* |_0_|.10|

Check appropriate facility HPRI Code (from PCS):

	HPRI #	*Code*	*HPRI Score*	**Flow Code**	**Multiplication Factor**
___	1	1	20	11, 31, or 41	0.00
				12, 32, or 42	0.05
___	2	2	0	13, 33, or 43	0.10
				14 or 34	0.15
_X	3	3	30	21 or 51	0.10
				22 or 52	0.30
___	4	4	0	23 or 53	0.60
				24	1.00
___	5	5	20		

HPRI code checked: |_3_|

Base Score: (HPRI Score) ___30_____ **x (Multiplication Factor)** __0.10____ = _____3_____ **(TOTAL POINTS)**

B. Additional Points--NEP Program
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

		Code	Points
_X_	Yes	1	10
___	No	2	0

C. Additional Points--Great Lakes Area of Concern
for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)

		Code	Points
___	Yes	1	10
___	No	2	0

Code Number Checked: A |_3_| B |_1_| C |___|

Points Factor 6: A |___|_3_| + B |_1_|_0_| + C |___|___| = |_____13_____| **TOTAL**

NPDES Permit Rating Work Sheet

NPDES No.: |_V_|_A__|_0__|_0__|_9_|_1_|_4_|_0_|_5_|

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	35
2	Flow/Stream flow Volume	10
3	Conventional Pollutants	5
4	Public Health Impacts	0
5	Water Quality Factors	0
6	Proximity to Near Coastal Waters	13
	TOTAL (Factors 1-6)	63

S1. Is the total score equal to or greater than 80? ___ Yes (Facility is a major) _X_ No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?
_X_ No
___ Yes (add 500 points to the above score and provide reason below:

Reason:

_____

_____

_____

_____

_____

NEW SCORE: 63

OLD SCORE: 63

Robert E. Smolhenn

Permit Reviewer's Name

(_757__)__518___-___2106___
Phone Number

07/09/08
Date

Revised 2/2003

State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Lake Gaston WTP

NPDES Permit Number: VA0091405

Permit Writer Name: Robert E. Smithson

Date: 07/17/08

Major [ ] **Minor** [X] **Industrial** [X] **Municipal** [ ]

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		**X**	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?			X
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		

I.B. Permit/Facility Characteristics - cont.	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?		X	
a. Has a TMDL been developed and approved by EPA for the impaired water?			X
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			X
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			X
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs

(To be completed and included in the record only for POTWs)

NOT APPLICABLE

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits - General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			
II.D. Water Quality-Based Effluent Limits – cont.	**Yes**	**No**	**N/A**
3. Does the fact sheet provide effluent characteristics for each outfall?			

4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4. Does the permit require testing for Whole Effluent Toxicity?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?			
2. Does the permit include appropriate storm water program requirements?			

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			

5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?			
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?			
a. Does the permit require implementation of the "Nine Minimum Controls"?			
b. Does the permit require development and implementation of a "Long Term Control Plan"?			
c. Does the permit require monitoring and reporting for CSO events?			
7. Does the permit include appropriate Pretreatment Program requirements?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions
Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset
Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals

(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits - General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?	X		
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		X	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

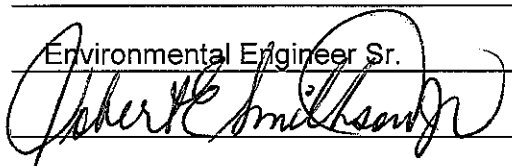
List of Standard Conditions – 40 CFR 122.41

Duty to comply	Property rights	Reporting Requirements
Duty to reapply	Duty to provide information	Planned change
Need to halt or reduce activity not a defense	Inspections and entry	Anticipated noncompliance
Duty to mitigate	Monitoring and records	Transfers
Proper O & M	Signatory requirement	Monitoring reports
Permit actions	Bypass	Compliance schedules
	Upset	24-Hour reporting
		Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Robert E. Smithson
Title	Environmental Engineer Sr.
Signature	
Date	07/17/08

ATTACHMENT 13

CHRONOLOGY SHEET

VPDES PERMIT PROGRAM

CHRONOLOGY OF EVENTS

APPLICATION RECEIVED	APPLICATION RETURNED	ADDITIONAL INFO REQUESTED	APPLICATION/ADD INFO DUE BACK IN RO	APPLICATION/ADD. INFO RECEIVED
06/09/08		06/16/08	06/24/08	06/24/08

APPLICATION TO VDH: 06/30/08	VDH COMMENTS RECEIVED: 07/07/08
APPLICATION TO OWPS:	OWPS COMMENTS RECEIVED:
APPLICATION ADMIN. COMPLETE: 06/24/08	APPLICATION TECH. COMPLETE: 10/7/08 ~~(VDH Comments)~~
DATE FORWARDED TO ADMIN:	WQ data for diss. metals

Date	DESCRIPTIVE STATEMENT [CHRONOLOGY OF EVENTS] (Meetings, telephone calls, letters, memos, hearings, etc. affecting permit from application to issuance)
06/16/08	Requested additional information, Appendix A & sludge plan & hauling route
06/24/08	Received additional information from facility
06/30/08	Applications sent out for State Agency comments
07/07/08	Received VDH comments - no objection
07/08/08	Requested tier determination & available STORET data from planning
07/15/08	Received info from planning (no STORET data available)
07/15/08	Sent application complete letter to permittee
07/17/08	DP/FS developed
07/18/08	DP/FS routed for TMP Development
2/5/09	TMP ReView received & incorporated
10/7/08	Water Quality data received for diss. metals — technically complete
2/5/09	TMP Revisions incorporated & routed for review to TC

ATTACHMENT 14

OTHER DOCUMENTS

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2103
www.deq.virginia.gov

L. Preston Bryant, Jr
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

February 23, 2009

Mr. A. Craig Maples, Water Resources Mgr. Administrator
Chesapeake, Department of Public Utilities
3550 S. Battlefield Blvd.
Chesapeake, VA 23322

RE: Reissuance of VPDES Permit No. VA0091405
Lake Gaston WTP, Chesapeake, VA

Dear Mr. Maples:

The State Water Control Board is considering reissuance of the referenced permit. Please review the enclosed public notice and draft permit package carefully.

Certain public notice procedures must be complied with before the actual permit can be approved. They are as follows:

1. The attached public notice must be published once a week for two consecutive weeks in a newspaper of general local circulation. Please complete, sign, and return the attached authorization form which will allow us to mail the notice to the newspaper and allow the newspaper to bill you for the public notice. Please return the Public Notice Authorization as soon as possible so that we can continue processing your permit. If you have not submitted the authorization form within 14 days, permit processing will cease.

2. A minimum of 30 days will be allowed for public response following the date of the first public notice. If no public response is received, or the public response can be satisfactorily answered, then the permit will be processed. However, if there is significant public response, then we may hold a public hearing. You will be advised if this occurs.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at (757) 518-2106.

Sincerely,

Robert E. Smithson, Jr.
Environmental Engineer Senior

Encl: Draft Permit and Fact Sheet
Public Notice
Public Notice Authorization Form

cc: DEQ-TRO PPP File# 1111

AUTHORIZATION TO BILL APPLICANT FOR A PUBLIC NOTICE FOR LAKE GASTON WATER TREATMENT PLANT RE: PERMIT NO. VA0091405

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in the: **Virginian Pilot**

Agent/Department to be billed: _____

Applicant's Address: _____

_____

_____

Agent's Telephone No: _____

I AM ALSO AUTHORIZING THE Virginian Pilot TO SEND THE AFFIDAVIT TO:

DEQ TIDEWATER REGIONAL OFFICE
MS. JEANNIE MASTICE
5636 SOUTHERN BOULEVARD
VIRGINIA BEACH, VA 23462

Authorizing Agent/Date Signed: _____

Print Name/Date Signed

Authorizing Agent's Signature _____

Signature

RETURN COMPLETED FORM TO: DEQ – Tidewater Regional Office
Ms. Jeannie Mastice
5636 Southern Boulevard
Virginia Beach, VA 23462

Cc: **(DEQ FILE 1111 PPP)**

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Chesapeake, Virginia.
PUBLIC COMMENT PERIOD: MONTH DAY, YEAR to TIME {p.m.} on MONTH DAY, YEAR
PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board
APPLICANT NAME, ADDRESS AND PERMIT NUMBER: City of Chesapeake, Dept. of Public Utilities; 3550 S. Battlefield Blvd.; Chesapeake, Va 23322; VPDES Permit No. VA0091405
FACILITY NAME AND LOCATION: Lake Gaston Water Treatment Plant; 5416 W. Military Highway, Chesapeake, Va. 23321.
PROJECT DESCRIPTION: The City of Chesapeake's Dept. of Public Utilities has applied for the reissuance of a permit for the public water supply system: Lake Gaston Water Treatment Plant. The applicant proposes to release treated industrial wastewaters at a rate of up to 1 million gallons per day into a water body. Dewatered residual solids from the treatment process will be hauled to the City's existing residuals disposal site located on the Northwest River Water Treatment Plant property on S. Battlefield Blvd. The facility proposes to release the treated industrial wastewaters to an unnamed tributary to Goose Creek in Chesapeake, Va. in the Lower James River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, total suspended solids, dissolved oxygen, total phosphorus and total residual chlorine.
HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.
CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION:
CONTACT: Robert E. Smithson, DEQ Tidewater Regional Office, 5636 Southern Blvd. Va. Beach 23462. Tel: 757-518-2106; Fax: 757-518-2103. E-mail: resmithson@deq.virginia.gov
The public may review the draft permit and application at the DEQ office named above {by appointment}.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2103
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

July 15, 2008

Mr. A. Craig Maples, Water Resources Administrator
Chesapeake's Lake Gaston WTP
3550 Battlefield Blvd. South
Chesapeake, VA 23322-2423

RE: Lake Gaston WTP: Application Complete;
VPDES Permit VA0091405, Chesapeake, VA

Dear Mr. Maples:

This office received the referenced revised application on June 24, 2008. The application is now deemed administratively complete and has been forwarded to sister Agencies for comment.

Based on this application, we will develop a draft permit for this facility. Upon completion, the draft permit, along with a fact sheet and public notice procedures, will be sent to you for your review.

We will strive to process the application in a timely manner. If you have questions about our procedures or the status of your permit application, please telephone me at (757) 518-2106.

Sincerely,

Robert E. Smithson, Jr.
Environmental Engineer Sr.

cc: DEQ - TRO PPP File # 1111

KAREN REMLEY, MD MBA FAAP
STATE HEALTH COMMISSIONER

COMMONWEALTH of VIRGINIA

Department of Health
OFFICE OF DRINKING WATER
SOUTHEAST VIRGINIA ENGINEERING FIELD OFFICE

830 SOUTHAMPTON AVENUE, SUITE 2058
NORFOLK, VIRGINIA 23510-1001
PHONE (757) 683-2000
FAX (757) 683-2007

MEMORANDUM

TO: Robert E. Smithson, Jr.
Environmental Engineer Senior
Department of Environmental Quality - Tidewater Regional Office

DATE: JUL 03 2008

FROM: Daniel B. Horne, P.E.
Engineering Field Director DBH

CITY/COUNTY: City of Chesapeake

PROJECT TYPE: ☐ New ☑ Renewal or Revision

☑ VPDES ☐ VPA ☐ VWPP ☐ JPA ☐ Other_____

☐ Number: VA0091405

OWNER/APPLICANT: City of Chesapeake Department of Public Utilities

PROJECT: Lake Gaston Water Treatment Plant

☑ There are no public water supply raw water intakes located within 15 miles downstream or within one tidal cycle upstream of the discharge. We do not object to the discharge.

☐ The raw water intake for the _____ waterworks is located _____ miles [downstream/upstream] of the discharge. This should be a sufficient distance to minimize the impacts of the discharge. We recommend a minimum Reliability Class of ____ for this facility. We do not object to the discharge.

☐ The raw water intake for the _____ waterworks is located _____ miles [downstream/upstream (within one tidal cycle)] of the discharge. We object to the proposed discharge, due to the potential threat to water quality at the intake.

☐ Please forward a copy of the Draft Permit for our review and comment.

☑ Comments: The City of Chesapeake's well source (WB-1) is located approximately 2,000 feet southwest of the discharge area and should not incur any impact.

Prepared by: Renée S. Hall
Renée S. Hall
District Engineer

RSH/bjm
pc: V.D.H. - Office of Drinking Water, Field Services Engineer

R:\DIST20B\Chesapeake\Northwest River System\Lake Gaston WTP\VPDES\VPDES Lake Gaston WTP 7-2008.doc

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2103
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

June 30, 2008

D. B. Horne, P.E.
Engineering Field Director
Virginia Department of Health
Office of Drinking Water
830 Southampton Ave., Room 2058
Norfolk, VA 23510

RE: Reissuance of VPDES Permit No. VA0091405
Lake Gaston Water Treatment Plant
Chesapeake, VA

Dear Mr. Horne:

Enclosed is a copy of the referenced VPDES permit application for your review and concurrence. A copy of this application is also being provided to the Division of Shellfish Sanitation in Richmond for their review and comment.

Please submit a letter to this office within 14 days with your comments or objections or a statement verifying that the Virginia Department of Health, Office of Drinking Water, has no comments on the application. You may contact me at 757-518-2106 or email at resmithson@deq.virginia.gov. if you have any questions.

Sincerely,

Robert E. Smithson, Jr.
Environmental Engineer Senior

cc: DEQ - TRO/file # 1111

Enclosure: Permit Application

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462

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Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

June 30, 2008

Division of Shellfish Sanitation
Virginia Department of Health
109 Governor Street, Room 614B
Richmond, VA 23219

RE: Reissuance of VPDES Permit No. VA0091405
Lake Gaston Water Treatment Plant
Chesapeake, VA

Dear Sir or Madam:

Enclosed is a copy of a VPDES permit application for your review. A copy has also been sent to the VDH Office of Drinking Water and the Virginia Marine Resources Commission. Please review this application and provide your comments within 14 calendar days to DEQ identifying the location of any shellfish growing areas that would have to be condemned pursuant to Va. Code § 28.2-807 (i.e., reclassified as restricted or prohibited as defined by the National Shellfish Sanitation Program) as a result of the proposed discharge of pollutants described in the application. Alternatively, you may respond to DEQ within 14 calendar days of receipt of the application that DSS intends to conduct a further evaluation of the proposed discharge site. If DSS intends to conduct a further evaluation, please provide your comments to DEQ within 30 calendar days after receipt of the application. In the event that DSS anticipates that, due to the complexity of a proposal or the scope of an evaluation, it will not be able to make a determination within 30 calendar days after receipt of the application, please, within 14 days of receipt, inform DEQ of the anticipated time required to further evaluate the application. These deadlines are specified in the agreement between the Director of DEQ and the Commissioner of the Virginia Department of Health to ensure that DEQ can process the permit in a timely manner.

Please also provide a copy of any correspondence relative to this application to the Virginia Marine Resources Commission at the following address:

Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News, VA 23607

If you have any questions, please do not hesitate to contact me by telephone at (757) 518-2106 or by e-mail at resmithson@deq.virginia.gov.

Sincerely,

Robert E. Smithson, Jr.
Environmental Engineer Senior

Enclosure: VPDES Permit Application
cc: TRO PPP File # 1111

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462

(757) 518-2000 Fax (757) 518-2103

www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

June 30, 2008

Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News, VA 23607

RE: Reissuance of VPDES Permit No. VA0091405
Lake Gaston Water Treatment Plant
Chesapeake, VA

Dear Sir or Madam:

Enclosed for your review is a copy of a VPDES permit application for a proposed discharge of pollutants from a point source to state waters adjacent to, or in near proximity to, shellfish growing areas. A copy of this application has also been sent to the Virginia Department of Health's Division of Shellfish Sanitation (DSS), and VDH's Office of Drinking Water. Further, DSS has been requested to copy VMRC on correspondence relative to this application.

Please review the application and DSS correspondence. If DSS notifies you that no condemnation of shellfish growing areas would be necessary as a result of the proposed discharge, then VMRC is not required to take any further action.

If DSS indicates in its correspondence that shellfish growing areas will have to be condemned (i.e., reclassified as restricted or prohibited as defined by the National Shellfish Sanitation Program) as a result of the proposed discharge, please fill out the attached certification form and send it to DEQ within 21 days of receipt of the DSS comments.

Alternatively, VMRC may respond to DEQ that more information is needed and that VMRC either intends to or does not intend to perform a field evaluation. If VMRC notifies DEQ that more information is needed and that it intends to perform a field evaluation, VMRC agrees to certify to DEQ within 30 calendar days after receipt of the notice that the condemnation will or will not have an effect on shellfish use now and in the foreseeable future. If VMRC certifies to DEQ that more information is needed and that it does not intend to perform a field evaluation, DEQ will contact the permit applicant to allow the applicant the option of obtaining a field evaluation of the areas proposed for condemnation. If VMRC receives a field evaluation from the applicant, please review the evaluation and fill out the attached certification form and send it to DEQ within 21 days of receipt of the evaluation.

These deadlines are specified in an agreement between the Director of DEQ and the Commissioner of VMRC to ensure that DEQ can process the permit in a timely manner. If you have any questions, please do not hesitate to contact me by telephone at (757) 518 – 2106 or by e-mail at resmithson@deq.virginia.gov.

Sincerely,

Robert E. Smithson, Jr.
Environmental Engineer Senior

Enclosure: VPDES Permit Application, Certification Form
cc: DSS, TRO PPP File # 1111

Virginia Marine Resources Commission
Evaluation and Certification on the Effects of Proposed Shellfish Condemnation
VPDES Permit Number: VA0091405
Facility Name: Lake Gaston Water Treatment Plant
Facility Location: Chesapeake, VA
Description of the designated area:

Presence or Absence of Shellfish; Identification of Species; Results of Survey:

Commercial Harvest Rates:

Private Oyster Ground Leases/Public Ground Designations:

Physical Parameters:

In accordance with 9 VAC 25-260-270, MRC has reviewed the above information for the VPDES application referenced above, and DSS information on shellfish growing areas that will be condemned (i.e. reclassified as restricted or prohibited as defined by the National Shellfish Sanitation Program) if the VPDES permit is issued for this discharge, and concludes the proposed condemnation will have the following effects on the shellfish use now and in the foreseeable future:

Signed: _____

Title: _____

Date: _____

This certification is intended to provide factual information to DEQ required by 9 VAC 25-260-270. This is not a final determination or case decision under the Virginia Administrative Process Act applicable to the above-mentioned facility or VPDES permit application. The final decision to issue or deny the VPDES permit application is within the discretion of the State Water Control Board.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
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Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

April 14, 2008

James K. Walski, P.E.
City Hall
Director, Department of Public Utilities
306 Cedar Road, 2nd Floor
Chesapeake, Virginia 23328

Re: Re-issuance of VPDES Permit No., VA0091405
Lake Gaston WTP, Chesapeake, VA

Dear Mr. Walski:

This letter is to remind you that your VPDES permit will expire on 05/02/2009. If you wish to continue discharging, you must reapply for the permit. The State Water Control Board's VPDES Permit Regulation requires that we receive a complete application at least 180 days before the existing permit expires. The deadline for submitting the application is 11/3/2008.

Early submissions are welcome and will better enable us to complete processing before permit expiration. The instructions and application forms are enclosed.

If you would like to request a waiver from any of the sampling or testing requirements in the application forms, please contact me prior to submitting your application or provide a thorough justification for the request when you submit your application.

Upon completing the application, return the original and five copies to the Tidewater Regional Office at the above address.

There is no application fee associated with this re-issuance process. The legislature has developed a new fee structure effective July 1, 2004, that eliminates application fees for VPDES and VPA permits except for new permit issuances and for general permits. You will be billed by DEQ in the fall of each year.

Please call me at (757) 518-2106 if you have any questions.

Sincerely,

Robert E. Smithson
Environmental Engineer Senior

Encl: Applications

cc: DEQ -TRO File – 1111 PPP

BJm → RES

Smithson,Robert

From: Craig Maples [cmaples@cityofchesapeake.net]
Sent: Thursday, April 10, 2008 4:29 PM
To: Smithson,Robert
Cc: Jim Walski; William Johnson
Subject: Re: Lake Gaston WTP Reissuance (Application)

Good afternoon Bob- thanks for the heads up.

Please send the renewal notice to James K. Walski, P.E., Director, Dept. of Public Utilities, 306 Cedar Road, 2nd Floor, City Hall, 23328. When I receive the package from Mr. Walski, I'll promptly initiate the renewal process.

A. Craig Maples
Chesapeake Public Utilities
Water Resources Administrator
cmaples@cityofchesapeake.net
Phone: 757.382.3550
Fax: 757.421.4483

>>> On 04/10/2008 at 11:01 AM, in message
<BDBCADF946E8F341AE062E035B7E7CE80122FCA3@deqex01.deq.local>, "Smithson,Robert"
<resmithson@deq.virginia.gov> wrote:

> Hi Craig,
>
> It's that time for us to send out the referenced application package. 5 years ago it was sent to Bill Meyer, Public Util. Acting Assistant Director. I wanted to know if we should send it to you instead at the Northwest River address or to the current Public Utilities Assistant Director? Please give me your preference on this and provide the address to send it to. Thanks.

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Chesapeake City - Lake Gaston WTP
ADDRESS 306 Cedar Rd
Chesapeake VA 23322
FACILITY LOCATION 5416 Military Hwy West, Chesapeake, VA 23321

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Minor 02/05/2009

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

VA0091405	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			1/W	EST
002 PH	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		1/M	GRAB
004 TSS	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	30	60	MG/L		1/M	5G/8HC
005 CL2, TOTAL	REPORTD	*********	*********		*********	*********					
	REQRMNT	*********	*********		*********	*********	11	UG/L		1/M	GRAB
007 DO	REPORTD	*********	*********			*********	*********				
	REQRMNT	*********	*********		4.0	*********	*********	MG/L		1/M	GRAB
012 PHOSPHORUS, TOTAL (AS P)	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	2.0	*********	MG/L		1/M	5G/8HC
013 NITROGEN, TOTAL (AS N)	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	NL	*********	MG/L		1/M	5G/8HC
089 DIS. SOLIDS, TOTAL	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	NL	NL	MG/L		1/M	5G/8HC

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
QL - Total Residual Chlorine 0.1 mg/l

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY